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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,131	07/23/2001	Peter Birke	10535 US	2838

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EXAMINER

CREPEAU, JONATHAN

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 02/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/830,131

Applicant(s)

BIRKE ET AL.

Examiner

Jonathan S. Crepeau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-57 is/are pending in the application.
- 4a) Of the above claim(s) 31-37, 39-45, 47-54, 56 and 57 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 38, 46 and 55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 38, 46, and 55 in the paper of December 8, 2003 is acknowledged. The traversal is on the ground(s) that the claims, as amended, include a common special technical feature (i.e., a powdery solid) which makes a contribution over the prior art. However, as set forth in the rejections below, it is believed that the art of record does in fact teach this subject matter. Thus, the inventions still do not include a common special technical feature which makes a contribution over the prior art. Further, Applicants assert that new claims 56 and 57 are part of the elected invention, i.e., the use of a layer in a fuel cell. However, it is submitted that claims 56 and 57 are drawn to the use of such layer in a battery, which is patentably distinct from the fuel cell of the elected invention. Accordingly, claims 56 and 57 are also withdrawn from consideration herein. An action on the merits of the elected invention, claims 38, 46, and 55, follows.

Oath/Declaration

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

The international application number is misidentified as "PCT/DE 99/07855." The correct number is as "PCT/EP 99/07855." Correction is required.

Priority

3. A copy of German application 199 08 532.3 does not appear to be present in the application file. This document has been ordered from the International Bureau and will be placed in the application file upon receipt.

Specification

4. The abstract of the disclosure is objected to because it exceeds 150 words in length. Additionally, the abstract (i.e., the one published on the face of the publication of the international application) makes reference to cancelled claims 1-7. Correction is required. See MPEP § 608.01(b).

Claim Suggestions

5. In claim 38, the language "or such an electrolyte" could be clarified to state that the electrolyte is a liquid inorganic or largely inorganic material, since the language references the corresponding liquid electrode structure. The limitation has been interpreted in this manner in this Office action. In claim 46, the phrase "in particular" could also be amended or removed to clarify the claim.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 46 provides for the use of a layer in a fuel cell, solar cell, or electrochemical sensor, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 46 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 38, 46, and 55 are rejected under 35 U.S.C. 102(e) as being anticipated by WO 99/44245. Regarding claim 38, the reference is directed to an ion conducting matrix comprising an inorganic powder, a polymeric binder, and an aqueous electrolyte (see abstract). The aqueous electrolyte may be inorganic (e.g., sulfuric acid, HCl, HBr, phosphoric acid, or nitric acid) (page 4, line 28). The matrix may be cast upon a substrate (page 8, line 19). Regarding claim 55, the inorganic powder may be silica or alumina (page 4, line 5). Regarding claim 46, the matrix may be used in an electrochemical sensor or a low-temperature fuel cell, e.g., a phosphoric acid fuel cell (page 1, line 9; page 2, line 11). Regarding claim 38, the inorganic powder functions to "improve" the properties of the matrix in regard to its support.

Thus, the instant claims are anticipated.

10. Claims 38 and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Kato (U.S. Patent 4,895,775). Regarding claim 46, the reference is directed to a phosphoric acid (i.e., low temperature) fuel cell (col. 1, line 35 et seq). Regarding claim 38, the fuel cell comprises an electrolyte matrix comprising an inorganic powder, polytetrafluoroethylene, and an aqueous

phosphoric acid electrolyte (see abstract). The matrix may be supported on an electrode substrate (see abstract).

Thus, the instant claims are anticipated.

11. Claims 38, 46, and 55 are rejected under 35 U.S.C. 102(b) as being anticipated by Mitsunaga et al (U.S. Patent 4,847,173). Regarding claim 46, the reference is directed to a phosphoric acid (i.e., low temperature) fuel cell (col. 6, line 19). Regarding claim 38, the fuel cell comprises an electrolyte matrix comprising an inorganic powder, polytetrafluoroethylene, and an aqueous phosphoric acid electrolyte (see col. 3, line 20 et seq). The matrix is supported on a substrate (17) (see col. 5, line 31 et seq.). Regarding claim 55, the inorganic powder may comprise silica, silicon nitride, or alumina (see col. 3, lines 26 et seq.).

Thus, the instant claims are anticipated.

Conclusion

12. The following notes are made with respect to the references cited in the International Search Report which bear an "X" label: Each of WO 98/18173, WO 97/49106, Blonsky (U.S.

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Patent 5,648,011), Kim et al (U.S. Patent 6,001,509), and JP 11-31414 does not anticipate claim 38 because each does not teach at least the feature of an inorganic liquid.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached at (571) 272-1302. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (703) 872-9306.



Jonathan Crepeau
Patent Examiner
Art Unit 1746
January 27, 2004